Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application. The following listing provides the amended claims with deleted material crossed out and new material underlined to show the changes made.

1-19. (Canceled)

20. (Previously Presented) A method for creating a description of a user interface that transacts with a database having a data model containing a plurality of entities, the description being created using the data model of the database, the method comprising:

a) receiving a request for the user interface from a client;

b) after receiving said request, classifying the plurality of entities into entity types, the classifying comprising:

determining whether a first entity in the plurality of entities satisfies a first set of conditions; and

classifying the first entity as a first entity type upon determining that the first entity satisfies the first set of conditions;

c) creating the description of the user interface based upon the classification of the plurality of entities; and

d) distributing the description to said client in order allow said client to generate elements of said user interface that permits a user to transact with said database.

21. (Previously Presented) The method of claim 20 wherein:

each entity in the data model describes a type of data object associated with the database; and

the classifying produces the first entity type for a first group of data objects and a second entity type for a second group of data objects, the data objects in the first group of data objects being updated in the database more frequently than the data objects in the second group of data objects.

22. (Previously Presented) The method of claim 21 wherein the first entity type is a Main entity type and the second entity type is an Enumeration entity type.

23. (Previously Presented) The method of claim 20 wherein the description is a generic description configured to be interpreted in different platforms or operating environments.

24. (Previously Presented) The method of claim 20 wherein the description is in eXtensible Markup Language (XML).

25. (Previously Presented) The method of claim 20 wherein the classifying and creating are performed automatically without human assistance.

26. (Previously Presented) The method of claim 20 further comprising:

before the classifying, obtaining a current data model of the database, the current data model reflecting any changes to the database up to when the current data

model is obtained, wherein a current description of the user interface is created using the current data model of the database.

27. (Previously Presented) The method of claim 20 further comprising:

after sending the description, retrieving data from the database, said data for populating at least one generated user interface element; and

sending the data to the client, said data sent prior to receiving any transaction from said user.

28-30. (Canceled)

31. (Previously Presented) A computer readable medium storing a computer program which when executed by at least one processor creates a description of a user interface that transacts with a database having a data model containing a plurality of entities, the description being created using the data model of the database, the computer program comprising:

a) instructions for classifying the plurality of entities into entity types, the instructions for classifying comprising instructions for:

determining whether a first entity in the plurality of entities satisfies a first set of conditions; and

classifying the first entity as a first entity type upon determining that the first entity satisfies the first set of conditions; and

b) instructions for creating the description of the user interface based upon the classification of the plurality of entities.

32. (Previously Presented) The computer readable medium of claim 31 wherein the description is a generic description configured to be interpreted in different platforms or operating environments.

33-34. (Canceled)

35. (Previously Presented) A method for generating a user interface that transacts with a database having a data model containing a plurality of entities, the method comprising:

sending a request for the user interface;

receiving a description of the user interface, the description being based upon classification of the plurality of entities into entity types, said classification of the entities initiated by the request, wherein the classification comprises classification of a first entity as a first entity type upon determination that the first entity satisfies a first set of conditions; and

generating the user interface using the description of the user interface, wherein said user interface allows a user to transact with said database.

36. (Previously Presented) The method of claim 35 further comprising:

after the generating, receiving data from the database in order to populate the at least one user interface element of said user interface, said data received prior to receiving any transaction from said user.

37. (Previously Presented) The method of claim 35 further comprising, before the receiving:

sending preferences for the user interface, the preferences being utilized in creating the description.

38. (Previously Presented) The method of claim 35 further comprising, before the receiving:

sending authentication information.

39-41. (Canceled)

42. (Previously Presented) A computer readable medium storing a computer program which when executed by at least one processor generates a user interface that transacts with a database having a data model containing a plurality of entities, the computer program comprising:

a set of instructions for receiving a description of the user interface, the description being based upon classification of the plurality of entities into entity types, wherein the classification comprises classification of a first entity as at least one of a first entity type and a second entity type upon determination that the first entity satisfies a first set of conditions; and

a set of instructions for generating the user interface using the description of the user interface.

43. (Previously Presented) The computer readable medium of claim 42 wherein the description of the user interface is created using a current data model of the

database, the current data model reflecting any changes to the database up to when the description is created.

44. (Previously Presented) The computer readable medium of claim 42, wherein the computer program further comprises:

a set of instructions for sending preferences for the user interface, the preferences being utilized in creating the description.

45. (Canceled)

46. (Previously Presented) A system comprising:

a database having a data model containing a plurality of entities; and

a server communicatively coupled to the database for creating a description of a user interface that transacts with the database, the description being based upon classification of the plurality of entities into entity types wherein the classification comprises classification of a first entity as a first entity type upon determination that the first entity satisfies a first set of conditions.

47. (Previously Presented) The system of claim 46 wherein the server obtains a current data model of the database, the current data model reflecting any changes to the database up to when the current data model is obtained, a current description of the user interface being created using the current data model of the database.

48. (Previously Presented) The system of claim 46 wherein the server is in persistent communication with the database.

49. (Previously Presented) The system of claim 46 wherein the server is communicatively coupled to a first client via a network and distributes the created description to the first client for enabling the first client to generate the user interface.

50. (Previously Presented) The system of claim 49 wherein the server provides the first client an only point of access to the database.

51. (Previously Presented) The system of claim 49 wherein the server is communicatively coupled, via the network, to a second client having a different platform or operating environment than the first client, and distributes the created description to the second client for enabling the second client to generate the user interface.

52. (Previously Presented) A computer comprising:

a) a description of a data store;

b) a browser; and

c) an application for generating user-interface elements by using said description and by retrieving a data set from said data store to populate at least one user-interface element, said user-interface elements for displaying in said browser, at least one user interface element for receiving queries for the data store.

53. (Previously Presented) The computer of claim 52 further comprising a storage for storing the description, the browser, and the application.

54-55. (Canceled)

56. (Previously Presented) The computer of claim 52, wherein said browser is a web browser, wherein said application is a distributed application running on said web browser.

57. (Previously Presented) The computer of claim 56, wherein said distributed application is an applet.

58. (Previously Presented) A method comprising:

a) receiving a first request for a first user interface to transact with a first data store;

b) supplying a first description to generate the first user interface;

c) receiving a second request for a second user interface to transact with a second data store; and

d) supplying a second description to generate the second user interface, wherein said first and second descriptions differ.

59. (Currently Amended) A method of ~~for~~ providing descriptions of user interfaces, the method comprising:

a) receiving a first request from a first user, said first request comprising authentication information for the first user;

b) receiving a second request from a second user, said second request comprising authentication information for the second user, the first and second users having different ~~roles~~ authentication information; and

c) supplying a first description to the first user and a second description to the second user, wherein the first and second descriptions are different based on the ~~roles~~ authentication information of the users.

60. (Previously Presented) The method of claim 59, wherein the first and second user interfaces comprises at least two user-interface elements for facilitating data transactions, wherein said first user interface comprises at least one more user-interface element than said second user interface.

61. (Previously Presented) The method of claim 59, wherein the first and second user interfaces are displayed in an application running on different computers.

62. (Previously Presented) The method of claim 60, wherein the application is a web browser.

63. (Previously Presented) The method of claim 58, wherein the first and second data stores are the different data stores, wherein the first request is received from a first user while the second request is received from a second user different than the first, wherein the first description is supplied to the first user while the second description is supplied to the second user.

64.-74. (Canceled)

75. (Previously Presented) The method of claim 20, wherein said request from said client initiates the classification of the entities into entity types.

76. (Previously Presented) The method of claim 20, wherein each entity corresponds to at least one table of said database.

77. (New) The computer readable medium of claim 31 further comprising a set of instructions for sending said description to said client in order allow said client to generate elements of said user interface from said description, said user interface elements allowing a user of said client to transact with said database.

78. (New) The computer readable medium of claim 31, wherein an entity describes a data object of said database through properties comprising at least one of an attribute and a relationship.

79. (New) The computer readable medium of claim 78, wherein the entity corresponds a table of said database.

80. (New) A method of generating a user interface, said method comprising:

a) from a client, receiving a request for the user interface;

b) in response to said request, creating a description of said user interface;

c) sending said description to said client;

d) from said client, receiving a request for data to populate at least one user interface element of said user interface;

e) retrieving said data from a data store; and

f) sending said data to said client in order to allow said client to populate said user interface element, said client enabled thereupon to generate said user interface which permits a user of said client to transact with said data store.

81. (New) The method of claim 80 further comprising:

after sending said data to said client, receiving, from the user of said client, a query for data stored in said data store.

82. (New) The method of claim 81, wherein said request for data to populate the user interface element is received automatedly from the client prior to receiving a transaction or a query from the user of said client.

83. (New) The method of claim 80 further comprising:

obtaining a data model of said data store,

wherein said creating said description comprises dynamically generating a description of said user interface based on an analysis of said data model in response to the request for the user interface from said client.

84. (New) A method of providing a user interface, said method comprising:

a) obtaining a data model of a database;

b) receiving a request for a user interface from a client;

c) in response to the request, dynamically creating a description of said user interface based on an analysis of said data model; and

d) sending said description to said client in order to allow said client to generate said user interface from said description, said user interface comprising user interface elements that permits a user of said client to transact with said database in a manner conforming to said data model.

85. (New) The method of claim 84, wherein the obtaining the data model comprises at least one of:

extracting the data model from said database, and

building the data model from data that exists in said database.

86. (New) The method of claim 84, wherein said data model comprises a plurality of entities, wherein each entity corresponds to at least one table of said database.

87. (New) A method of generating a user interface, said method comprising:

a) sending a request for the user interface to a server;

b) in response to the request, receiving a description of a data store from the server; and

c) generating the user interface, said generating said user interface comprising:

i. creating user interface elements for the user interface based on the description,

ii. from the server, receiving data stored in said data store, and

iii. populating at least one user interface element with said data,

wherein said generated user interface allows a user to interact with said data store using said user interface elements.

88. (New) The method of claim 87, wherein generating the user interface further comprises:

before receiving the data stored in said data store, automatically sending a request for the data stored in said data store in order to populate the user interface element.